

Mail Stop 3561

UNITED STATES SECURITIES AND EXCHANGE COMMISSION WASHINGTON, D.C. 20549

April 24, 2017

Richard D. Peach Senior Vice President, Chief Financial Officer and Chief of Corporate Operations Schnitzer Steel Industries, Inc. 299 SW Clay Street, Suite 350 Portland, Oregon 97201

Re: Schnitzer Steel Industries, Inc.

Form 10-K for the Fiscal Year Ended August 31, 2016

Response Dated April 17, 2017

File No. 0-22496

Dear Mr. Peach:

We have reviewed your April 17, 2017 response to our comment letter and have the following comment. In our comment, we may ask you to provide us with information so we may better understand your disclosure.

Please respond to this comment within ten business days by providing the requested information or advise us as soon as possible when you will respond. If you do not believe our comment applies to your facts and circumstances, please tell us why in your response.

After reviewing your response to this comment, we may have additional comments. Unless we note otherwise, our references to prior comments are to comments in our April 4, 2017 letter.

Form 10-K for the Fiscal Year Ended August 31, 2016

Non-GAAP Financial Measures, page 47

1. We have reviewed your response to comment 1 in which you represent that you do not believe you have substituted individually tailored measurement methods in place of GAAP. With regard to your presentation of Adjusted Operating Income (Loss) Excluding Estimated Average Inventory Accounting, you also state the metal spread is a key metric in the scrap metal industry. Please tell us your consideration of including a

Richard D. Peach Schnitzer Steel Industries, Inc. April 24, 2017 Page 2

discussion of the percentage increases or decreases in the metal spread, and the impact, quantitatively and qualitatively, metal spreads had on your operations as a whole.

You may contact Donna Di Silvio, Accountant, at (202) 551-3202 or me at (202) 551-3344 with any questions.

Sincerely,

/s/ Jim Allegretto

Jim Allegretto
Senior Assistant Chief Accountant
Office of Consumer Products

cc: Peter B. Saba Senior Vice President, General Counsel and Corporate Secretary